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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/534,466 | 05/11/2005 | Juerg Zellweger | 26764U | 6956 |

20529 7590 05/05/2006

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112 South West Street
Alexandria, VA 22314

EXAMINER

ROST, ANDREW J

ART UNIT PAPER NUMBER

3751

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/534,466

Applicant(s)

ZELLWEGER, JUERG

Examiner

Andrew J. Rost

Art Unit

3751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5/11/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 08/09/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings contain poor line quality. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The disclosure contains the following informalities:

Page 1, first full paragraph, the claims are referenced by the phrase "as claimed in the preamble of claim 1", this reference to the claims should be removed;

Page 2, first full paragraph, the claims are referenced by the phrase "having the features defined in claim 1", this reference to the claims should be removed;

Appropriate correction is required.

Claim Objections

4. Claim 9 contains following informalities:

Claim 9 contains reference characters not enclosed by parentheses.

Appropriate correction is required.

5. The claims are objected to because they include reference characters which are not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rendered indefinite by the phrase "on the outer side of the closing body (3) and/or on the inner side of the housing (2), especially in the region of the flow area", the examiner is unsure of the structure being claimed and to the claimed location of the interfering means.

8. Claim 7 recites the limitation "the diametral region" in claim line 3. There is insufficient antecedent basis for this limitation in the claim.

9. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 9 recites the

broad recitation at an angle (α) between 60° and 179°, and the claim also recites preferably 120° which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Sands (3,085,589).

Regarding claim 1, Sands ('589) discloses a safety valve (20) having a valve member in a housing (28) that is guided in a track (41) in a motional direction from an open position to a closed position (moves in direction as seen in Figure 4 to Figure 5) with the valve member having interfering means (impeller disc 44 and O-ring 47) that aid in moving the valve member in response to a change in pressure (Col. 2, lines 36-40).

In regards to claims 2 and 3, Sands ('589) discloses a series of baffles sticking out into the flow area (baffles being the impeller disc 44 and O-rings 47).

12. Claims 1, 4-8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Sands (3,683,957).

Regarding claim 1, Sands ('957) discloses a safety valve (10) with a valve element in a housing (11, 12) and the valve element being a rotationally symmetrical closing body guided in the housing in at least one direction (movement of the closing body is shown in Figure 1 and Figure 3) and the closing body having interfering means (disc 31 in association with valve surfaces 40, 41) that affect the flow through the passage (C).

In regards to claims 4-8, Sands ('957) discloses the safety valve having at least one interfering edge (a first edge is defined as being between the valve surface 40 and the disc 31 and a second edge is defined as being between the disc 31 and the valve surface 41) with the at least one interfering edge is disposed on the outer diameter of the closing body (Figure 1) and the closing body having two differently inclined surfaces (conical end 36 and valve seat 40 are different angles) and the differently inclined surfaces meet in the area of a valve seat (25) when the valve is in a closed position and the inclined surfaces start as a conical shape (conical end 36) and ends in a frustoconical path (incline of valve seat 40 is in the form of a frustoconical shape as seen in Figure 1).

In regards to claim 10, Sands ('957) discloses the safety valve having the interfering edge formed at angle between 60° and 179° .

13. Claims 1, 4, and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Sarro (5,207,243).

Regarding claim 1, Sarro discloses a two way piston check valve having a movable valve member (17) in a housing (11) with interfering means (seat elements 20) interact with the flow and influences the turbulence of the flow.

In regards to claims 4 and 10, Sarro discloses the interfering means having at least one interfering edge (intersection on seat elements 20 of the tapered inner surface 22 and opposite surfaces 23 that intersect at an angle less than 180°).

In regards to claim 9, Sarro discloses the interfering means being located on the housing and in the connecting region of the housing between two pipes (P1, P2).

In regards to claim 11, Sarro discloses a circumferential recess formed by two wall portions (tapered inner surface 22 along with annular spacer ring 24 and the tapered inner surface 22 of the other seat element form a circumferential recess).

In regards to claim 12, Sarro discloses the valve member is configured as a hollow body (as seen in Figure 1).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarro in view of Applicant's admitted prior art (Applicant's specification, page 1, last paragraph, lines 4-6).

Sarro discloses a two-way piston check valve having a hollow valve member that is guided and fastened to a guide tube and being formed of shells that are attached at an outer diameter. Sarro does not disclose constructing the valve member of sheet metal. However, Applicant's admitted prior art discloses that forming closing bodies of sheet metal and of a hollow body nature in order to keep the inert mass as small as possible to be old in the art (Applicant's specification, page 1, last paragraph, lines 4-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the valve member of Sarro of sheet metal as taught by Applicant's admitted prior art in order to keep the inert mass as small as possible.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Diescher (1,956,010) discloses a double acting check valve that has interfering edges and a movable closing body that is guided on a track. McCrum (4,456,029) discloses a fuse for a fluid line that has an interfering edge on the closing body and is guided on a track.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew J. Rost whose telephone number is 571-272-2711. The examiner can normally be reached on 7:30-5 M-Th and 7:30-5 every other Friday.

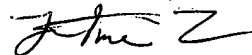
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 571-272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrew J Rost
Examiner
Art Unit 3751



JUSTINE R. YU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

5/1/06